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Combat Crew

strategic air command

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JANUARY 1980

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"Courts and magistrates may be set up but they cannot function without sheriffs and constables."
Sir Winston Churchill

SAC COMBAT CREW MEMBERS

Let's talk about crew duty and what's ahead for SAC in the 1980s. This decade will be one of the most important in our nation's history as a world power; perhaps *the* most important. It is a time during which vital decisions will be made and past decisions will come to fruition — decisions that will affect every aspect of crew duty and, ultimately, the ability of this command to accomplish its deterrent mission.

Lest there be any doubt in your mind, the crucial element separating American democracy from a world dominated by communism is you. Together with other Air Force, Army and Navy alert crews, the SAC alert force stands as the bulwark of America's political, economic and military strength . . . a strength which provides the diplomats and statesmen of the world with the time and opportunity to seek peaceful solutions to international problems.

What can you expect during the decade ahead? For the command, we hope to see major new weapons systems coming on line and much needed modernization of our existing forces. The MX is now in full scale engineering development; the first ALCM equipped B-52G will go on alert in 1982; some support is gathering for reengining the KC-135 fleet; in a few months, we will start bending metal for a follow-on to the U-2, the TR-1; the KC-10 is scheduled to arrive at our operational units beginning next year; and we are now defining the requirements for a new manned bomber.

In addition, SAC is working hard to gain DOD and congressional approval for 155 stretched and reengined FB-111B/Cs, as well as an additional buy of two E-4B advanced airborne command post aircraft. Of course, the reverse of this rather optimistic picture must also be considered: continued cuts in the operating and maintenance budget, delayed programs, and the ever present threat of cancellation of these and other critically needed systems.

Part of your reaction to these new systems is most likely, "So what!" By the time they become operational, you'll be off crew; so the logical question then becomes, "What is happening in the meantime, while I'm still on crew?" The answer is: we continue to stretch our assets and talents to the limit, and show the enemy through our daily operations, exercises and inspections that "peace" may be our "profession" but fighting and winning in combat is what SAC does best.

Over the years, SAC has built a special identity among military organizations and the reputation of being a tough command. A former Chairman of the Joint Chiefs of Staff, Admiral Thomas Moorer, once said, "SAC enjoys the worldwide reputation of being the ultimate in professionalism and has set the standard for all military organizations of the world." Such standards do not come about by mere chance or edict, nor does professionalism automatically accompany the award of an aeronautical rating or the missile badge. Rather, they evolve through hard work, sound crew procedures, and practice — lots of it.

I realize we demand much from you, but it is an absolute requirement of our profession. I also understand your concerns and anxieties because, in many ways, our jobs are very much alike. We both have a limited supply of resources to manage, a crew of dedicated men and women, and, most important, the responsibility of accomplishing a critical mission.

—Your crew flies four times a month . . . mine fly 4,700 times.

—Your crew spent four hours in the MPT last month . . . mine had 5,400 hours.

—Your crew off-loaded 28,000 pounds during refueling operations in December . . . mine transferred 17,700,000.

—Your crew averaged six recce sorties a month

General R. H. Ellis
Commander in Chief, SAC

last year . . . mine flew every day, in every part of the world.

I'm sure you realize our jobs are also very different, but the basics remain the same. Let's examine some of the most serious challenges we will face in the decade ahead.

— Energy is one of America's biggest problems and greatly affects every phase of SAC crew duty . . . particularly our flying operations. During the past ten years, the per flying hour cost of fuel increased 500% while the Air Force flying hour program has been cut in half. The airlines are experiencing similar problems, as shown by continuing cutbacks in scheduled routes, employee furloughs and reduced hiring. For every 10¢ per gallon increase in the price of JP-4, the annual gas bill for the Air Force goes up by over $400 million.

What this means is that we need to find new, more effective ways to maintain flying proficiency. The suggestion box is wide open and we are looking for ideas from the people closest to the solution . . . you. Several fixes are now under consideration: shorter training missions with more activities during each sortie; the use of a companion trainer aircraft for bomber crews; more realistic, sophisticated simulators; and so on. Finding ways to do more with each gallon of fuel is one of the command's top priorities.

— Keeping our good people on board is another tough challenge we must face in the 1980s. Not everyone is cut out for a career in the military — even fewer for a career in SAC. We demand absolute compliance and near perfection in combat crew duties and will not permit the slightest deviation from rules involving the handling and safguarding of nuclear weapons. Period.

Drug and alcohol abuse cannot and will not be tolerated. Although we draw our people from society, we should not mirror the larger society in those areas hazardous to our mission.

Retention always has been a problem, but it will become even more so during the next ten years. The civilian competition sitting outside our gates will continue to offer greater financial enticement. The number of eligible 18-year-olds will decrease steadily, impacting on our recruiting base and making retention all the more important.

As you are well aware, flying crew shortages already have begun to appear. We also see a significant increase in the number of second and first lieutenants in missile crew positions traditionally filled by captains and majors. The senior leadership of the Air Force is doing everything possible to make crew duty and a military career a better way of life: through more equitable compensation; improved medical care; increased promotion opportunity; and greater career stability.

Reducing crew irritants is another area to which we need to continually pay attention. *No profession* is without irritants and we are taking action to alleviate those which have been identified. However, I'm sure you realize not all can be eliminated without adversely affecting the mission.

The bottom line to all of this is that how well you and I do our jobs will determine, to a great extent, whether or not the United States will remain a world leader in the 1980s. That's a pretty heavy responsibility but one each of us must accept.

For those of you who have what it takes to stick it out as a member of the finest, toughest command in the Air Force and are willing to make the sacrifices such a commitment entails, I say "welcome." We need you. The future of America rests in your capable hands. ★★★★

Combat Crew

Magazine of the Strategic Air Command · 30th Year of Publication

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Out Of Gas 22

ON OUR COVER

The strength of SAC is symbolized on this month's cover as we enter the decade of the '80s.

SACRP 127-1 VOL. XXX NO. 1 January 1980

COMBAT CREW is an internal publication of the Strategic Air Command with the sole purpose of promoting safety. The contents of this magazine are informative and not to be considered as directive in nature. Facts, testimony and conclusions of all mishaps printed herein may not be construed as incrimination under Article 31 of the Uniform Code of Military Justice. All names, dates and places used in conjunction with mishap stories are fictitous. Written permission must be obtained from Headquarters, Strategic Air Command, before any material may be reprinted by other than U.S. Air Force organizations. Use of funds for printing this publication has been approved by Hq. USAF, Distribution FX, controlled by IGFC. SAC units submit distribution requests through local PDO.

Subscriptions are available from: The Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Price: $14.00 per year domestic; $17.50 if mailed to a foreign country; or $1.20 single copy. Authority to publish this periodical automatically expires on 26 January 1980, unless its continuance is authorized by the approving authority prior to that date. Contributions are encouraged as well as comments and criticisms. Direct correspondence with the Editor is authorized. Address correspondence to Editor, COMBAT CREW, Hq SAC IGFC, Offutt AFB, Ne. 68113.

GIANT

Maj Steve Miller
Editor

As SAC enters the decade of the eighties, its strength was once again reaffirmed as the results of GIANT VOICE 79 were announced. FB-111 wings made it five in a row when the 509th BMW was announced as the winner of the Fairchild Trophy.

GIANT VOICE 79, the SAC Bombing and Navigation competition, actually began in August when the first phase of the three phase competition was initiated. All SAC CONUS based bomber and tanker crews that were mission ready on 1 August 79 were eligible to participate in the competition. The first phase consisted of the evaluation of crews during normal training missions to select the top three crews to continue on to the semifinal phase.

During the semifinal phase, SAC crews flew a designated competition route. Joining the SAC crews during this phase were three F-111 crews from TAC, four RAF Strike Command crews, selected crews from ANG/AFRES units and for the first time, crews from the recently created ADTAC who flew interceptor activity in F-106 aircraft.

Each unit's top crew in the semifinal phase went on to the final phase which was flown on 19 November. Bomber activity during the semifinal and final mission included: a scored high altitude simulated release, one ECM target defense run and one ECM missile defense run, two scored simulated low altitude multiple bomb/SRAM releases, one fighter intercept exercise (semifinal only), and a refueling exercise.

Tanker activity included: a scored orbit exercise with a time and position score at the ARCP, two night celestial navigation termination exercises, an on-course rendezvous exercise, and one air refueling (collocated units only).

Scoring of the mission was conducted by various 1CEVG detachments operating the Strategic Training Routes (STR). Scores completed by the STR sites were sent to 1CEVG headquarters for

VOICE '79

USAF Photo by A1C Ed Foster

final evaluation and analysis prior to official release.

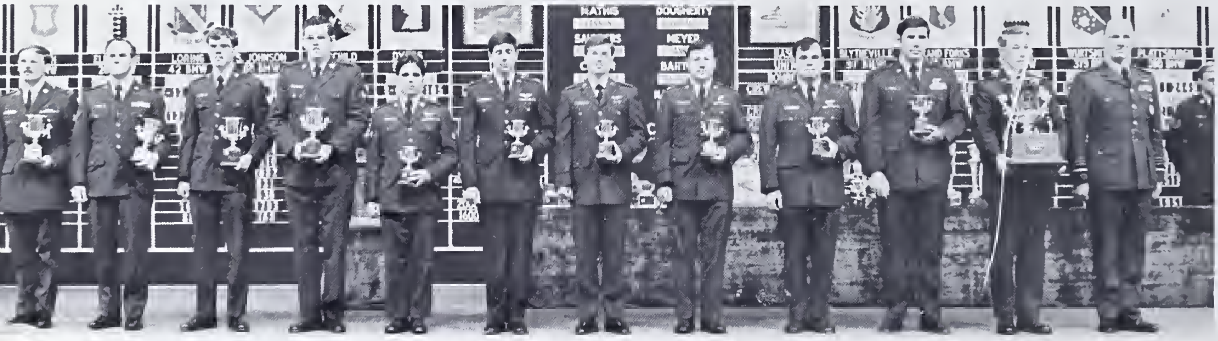
The final phase mission was intentionally designed to be very difficult and challenging to the participating crews. All crews who flew in the final phase were in attendance at the competition symposium held from 27-29 November at Barksdale AFB.

The competition symposium was held as a forum to analyze the mission results with all participating crews as well as to name the trophy winners. Maj Gen Andrew Pringle, Jr., SAC DCS/Operations, was on hand to announce the winners during the competition banquet.

Winning the prestigious Fairchild Trophy was the 509th Bomb Wing from Pease AFB. The 509th's FB-111 and KC-135 crews earned 91.8 percent of the possible points. This was 3.2 percentage points

Presenting the coveted Fairchild Trophy to the 509th BMW members is General Lew Allen, Jr., Chief of Staff, United States Air Force. Accepting the trophy is Col Samuel H. Swart, Jr., commander 509th.

Accepting the Mathis Trophy from Air Chief Marshal Sir David Evans is Col Robert I. McCann, Wing Commander of the 27th FTW, Cannon AFB. F-111 Crew R-260 earned the most bombing points.



The Dougherty SRAM Trophy went to Crew E-21 from the 379th BMW, Wurtsmith AFB.

more than the second place 380th Bomb Wing from Plattsburgh, last year's winner.

Commenting on the Pease victory, Gen R. H. Ellis, CINCSAC, stated "I think most of the people in the competition understand that mechanically the FB-111 is the most advanced bombing machine in the whole United States Air Force. If it works right, it ought to win. This year it worked right. We're delighted to see the 509th take the Fairchild."

Gen Lew Allen, Jr., Chief of Staff, United States Air Force, was on hand to formally present the Fairchild Trophy to Col Samuel H. Swart, Jr., commander of the 509th, and his crews and maintenance representatives who worked hard to win the award.

The TAC crew R-260 from Cannon AFB received both the Mathis Trophy and the John C. Meyer Trophy. This was the first time a TAC unit won these awards. Another first time winner was the ANG. The 157th AREFG, New Hampshire ANG, Pease AFB, won the Navigation Trophy. This was the first time a trophy was won by an ANG or AFRES unit in a GIANT VOICE competition.

Repeat winners from last year included Crew S-01 from Fairchild again taking the Maj James E. Bartsch Memorial ECM Trophy, Crew R-64 from Ellsworth winning the Crumm Trophy and 8th AF once again outpointed 15th AF to win the Doolittle Trophy.

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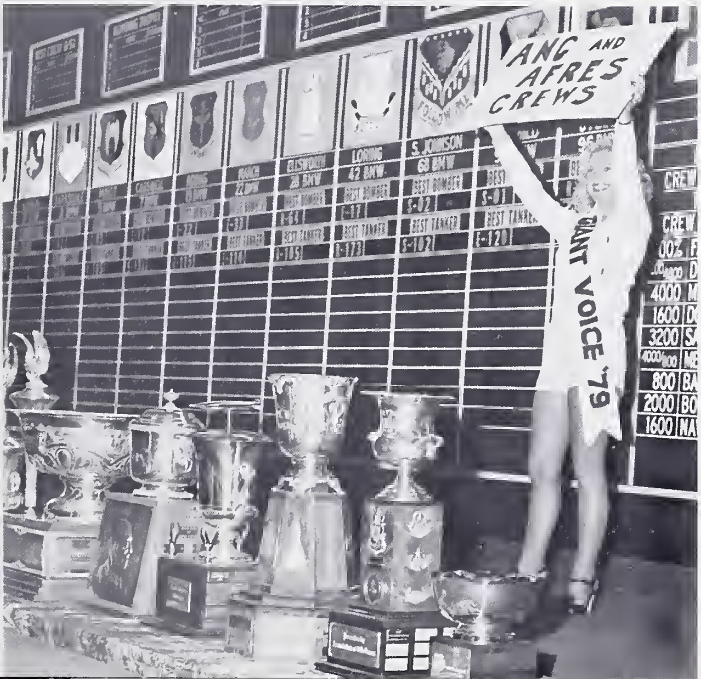


GIANT VOICE '79

OFFICIAL TROPHY STANDINGS

FAIRCHILD TROPHY

1	509BMW	91.8%
2	380BMW	88.6%
3	28BMW	85.7%

DOOLITTLE TROPHY

1	8AF	76.5%
2	15AF	72.7%

MATHIS TROPHY

1	27TFW	3887 points
2	509BMW	3878 points
3	379BMW	3523 points

DOUGHERTY TROPHY

1	379BMW	1497 points
2	97BMW	1473 points
3	509BMW	1440 points

SAUNDERS TROPHY

1	380 BMW	2789 points
2	157ARG	2768 points
3	100ARW	2713 points

MEYER TROPHY

1	27TFW	3827 points
2	509BMW	3741 points
3	380BMW	3518 points

BARTSCH TROPHY

1	28BMW	711 points
2	319BMW	667 points
3	68BMW	631 points

CRUMM TROPHY

1	92BMW	667 points
2	2BMW	659 points
3	68BMW	636 points

BOMBING TROPHY

1	380BMW	1951 points
2	27TFW	1950 points
3	509BMW	1946 points

NAVIGATION TROPHY

1	157ARG	1395 points
2	305ARW	1390 points
3	380BMW	1309 points

BEST CREW (B-52)

1	92BMW	2342 points
2	28BMW	2310 points
3	97BMW	2276 points

BEST CREW (KC-135)

1	380BMW	1503 points
2	509BMW	1477 points
3	305ARW	1445 points

BEST CREW (FB-111)

1	509BMW, S-01	2527 points
2	380BMW, S-53	2449 points

BEST CREW (F-111)

1	27TFW, R260	2297 points

BEST CREW (VULCAN)

1	RAF1	2028 points
2	RAF4	2015 points

BEST INTERCEPTOR

318FIS McChord AFB

Maj Gen Andrew Pringle, Jr., SAC/DCS Operations, presented the Best Vulcan Crew Trophy to RAF 01, Waddington.

STRIKE COMMAND

A Friendly Competitor in Giant Voice '79

Photos and info from Strike Command Hqs RAF, High Wycombe, England

Royal Air Force crews participating in SAC's bombing competition were at Barksdale AFB, representing the United Kingdom's famed Strike Command. This unique command was formed in 1968, when the RAF's striking power was for the first time concentrated into one hard-hitting unit. Later, integration of that same command into NATO was accomplished, and their contribution took a major step forward in April 1975, when the Air Officer Commanding, Strike Command, was made Commander-in-Chief United Kingdom Air Forces and placed in the direct chain of command to the Supreme Allied Commander Europe.

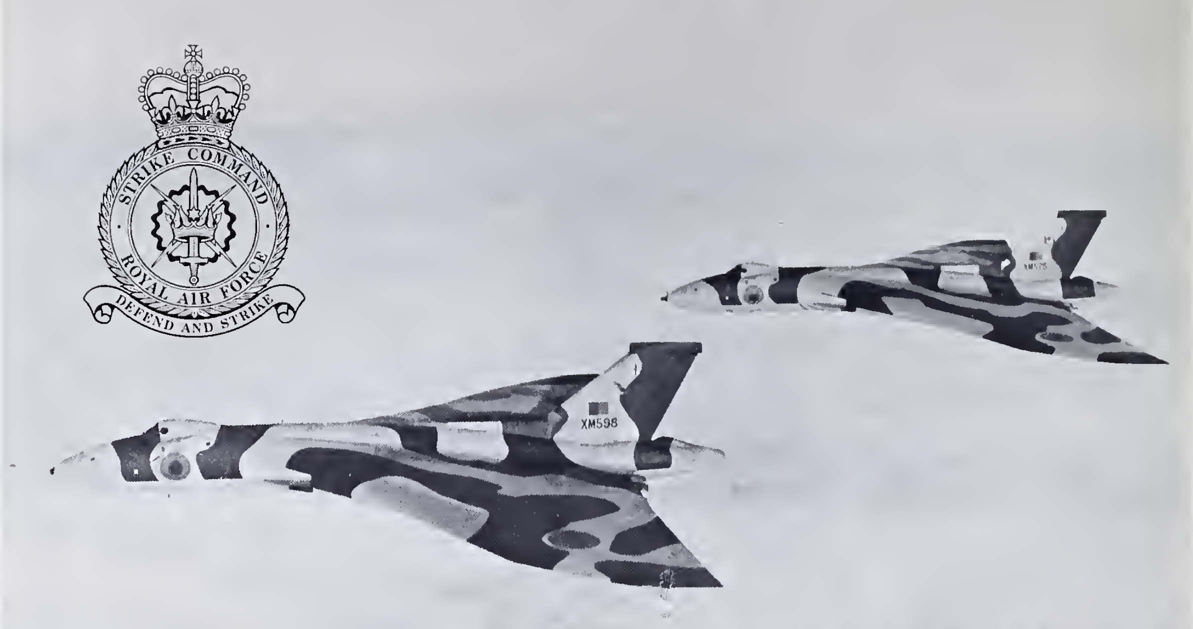
Air power over and around the skies of the United Kingdom is a key factor for the major NATO formations. Immediate and flexible response of air power to back NATO is very necessary. Before integration, Strike Command earmarked only specific forces for NATO assignment, today all hitting power and support elements can be readied at an early stage of alert.

Under UKAIR, the major subordinate NATO command, are four groups located in different parts of the country. These are the tools which implement the command's policies. They are **1 Group** (strike, reconnaissance and tankers); **11 Group** (air defense); **18 Group** (maritime reconnaissance and offensive roles, and search and rescue), and **38 Group** (offensive support and fixed wing and rotary wing transport).

If a state of alert is declared on NATO's flanks, the forces of Strike Command are able to deploy rapidly to the northerly snows of Norway or the warmest southern areas. By using in-flight refueling fighters and offensive support, aircraft can be more effectively and swiftly sent to their destinations, and the land-based fighters can be given extended range and duration.

The nuclear element from Strike Command is provided by the delta-winged Vulcan medium bombers and the Buccaneer. Both aircraft employ hi-lo-hi profiles to enhance their penetration capability. The Vulcan are assigned to provide a very hard punch at a very long range. The assigned Buccaneer force also carries a hard punch but over a shorter range than the Vulcan. All of the command's strike force assigned to NATO are targeted against land targets. In addition, Buccaneers assigned would spearhead the destruction of prime naval targets.

With the "trip wire" policy abandoned in favor of flexible response, the conventional armoury of Strike Command is now even more important. Both the Vulcan and the Buccaneers have conventional roles too. The Vulcan can carry 21 1000-pound bombs making it a versatile weapons system. The Buccaneer is in its element at low level and can operate close to the speed of sound. It is armed with the latest air-to-surface missiles and bombs — including TV Martel and two-inch rockets. Besides this punch of Strike Command, **1 Group** has reconnaissance plus its in-flight refueling capability. Canberras and Vulcans in the low-level photo-reconnaissance and high level radar surveillance roles respectively provide the information while the



Two Vulcan BMK 2 bombers of the Royal Air Force Strike Command

Victor tankers provide flexibility in aircraft deployment.

OTHER ELEMENTS OF UKAIR

Coverage of the skies over and around Britain falls to the Phantoms and Lightning interceptor fighters of No. **11 Group.** These are based near Britain's east coast ready to meet the threat of enemy bombers and maritime reconnaissance aircraft such as the Badger, Bear and Backfire. Fleet air defense is also the responsibility of 11 Group and UK aircraft regularly exercise with NATO's navies, providing both air cover and training for the ships themselves against air attack. The fighters are supported by a network of air defense radars situated throughout the British Isles, together with Shackleton airborne early warning aircraft which are currently on task over the sea to give wide span radar cover beyond the line of sight of the land based radars.

Offensive support provided by **38 Group** is a key factor for the success of land forces in Europe and the RAF is equipped with the most up-to-date aircraft for the job. The latest weapons system to enter RAF service is the Anglo-French Jaguar offensive support aircraft. Although a single-seater, it is comprehensively equipped for low level attack and can carry a weapon load of over four tons. It has been designed to operate from grass strips and can be readily and easily serviced. The Jaguar has replaced the Phantom in this role, permitting the latter to move over to air defense. Helping to provide valuable information of targets both before and after an attack are the recce Phantoms which carry infra-red line scan, vertical and horizontal cameras and sideways looking radar, in a recce pod mounted on the center line.

The world's first operational vertical takeoff jet, the Harrier, is assigned to the **ACE Mobile Force** and is a most versatile weapons platform, able to operate from small pads the size of a tennis court among trees or from restricted urban areas as was demonstrated in the 1969 Transatlantic air race when it operated from the coal yard at Paddington Station. The Harrier is armed with SNEB rockets and a variety of bombs.

Logistic support for troops in the field assigned to the UKMF and AMF comes from Wessex and Puma helicopters which can also be used for medical evacuation and liaison duties. Medium and long range airlift is provided by Hercules and VC-10 transports.

When the elements of **38 Group** are committed to a crisis they take with them the air portable field equipment they require to be self-sufficient including full communications for air traffic and command purposes.

Giving the forward airheads cover from low flying enemy aircraft are the soldiers of the RAF — men of the RAF Regiment, which is administered by **38 Group.** They are equipped with Tigercat and Rapier surface-to-air missiles and frequently train on maneuvers in Europe with other NATO forces.

The men who fly the Hawker Siddeley Nimrod submarine hunter/killer aircraft say it is the finest aircraft of its type today. The Nimrod provides the mainstay of **18 Group's** maritime force. Virtually a flying laboratory, it is fitted with advanced computers and radars, giving its 12-man crew eyes ahead, behind and under the sea. Using its four Rolls Royce Spey engines, Nimrod can get on task quickly and then reduce to two engines for slow-speed, low level patrol surveillance. It can track a submarine, position it, and then destroy it with either conventional or nuclear weapons. In a rescue role the Nimrod can employ its sophisticated electronics to locate wreckage and survivors and then drop lifesaving apparatus. Close offshore rescue is the job of Whirlwind and Wessex helicopters.

Looking to the future, the RAF will be receiving the Panavia Multi-role Combat Aircraft (Tornado) which will enter service in the strike/attack and air defense roles. This swing-wing, twin-engined aircraft will provide Strike Command the modern hitting power it will require to back NATO quickly and effectively in the future.

THE COMMANDER

Air Chief Marshall Sir David Evans, Air Officer Commanding-in-Chief, Royal Air Force Strike Command

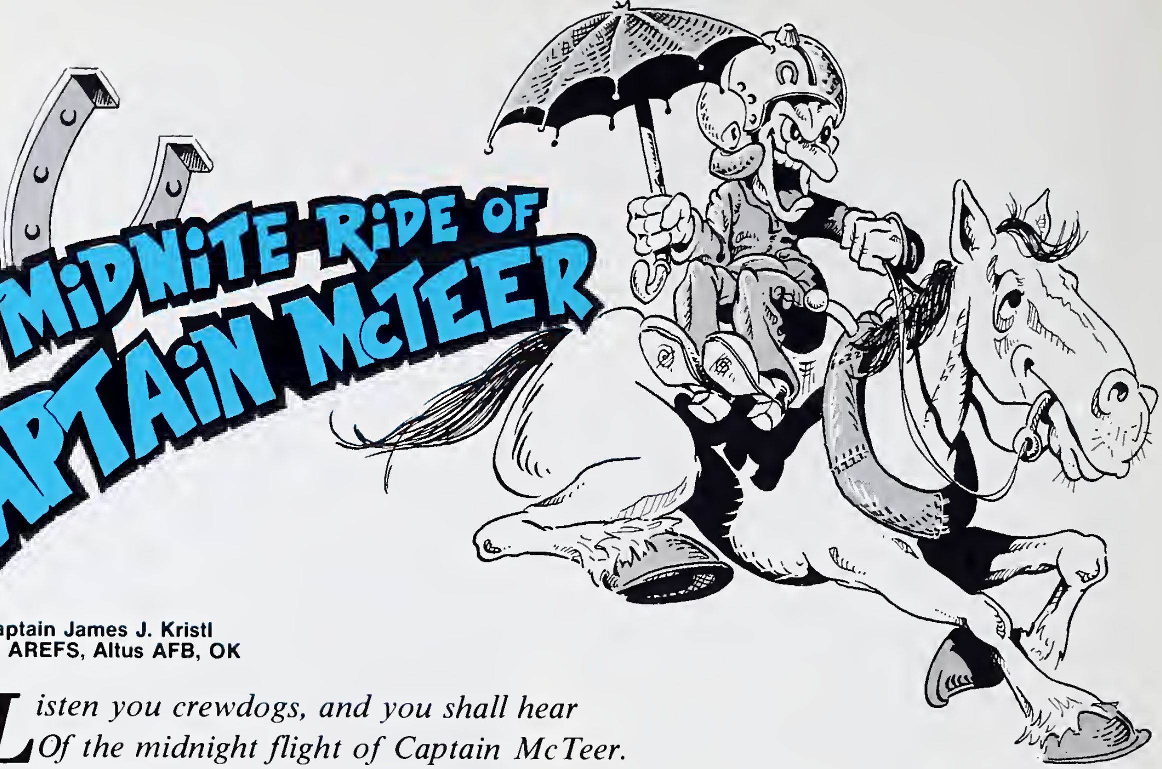
Air Chief Marshal Sir David Evans, Air Officer Commanding-in-Chief Royal Air Force Strike Command, and Commander-in-Chief United Kingdom Air Forces, has the unique distinction of being an honorary citizen of two American cities: Shreveport and Bossier in Louisiana. He was awarded the keys to both cities in 1974 when serving as the AOC Number 1 Group, which comprised what used to be known as RAF Bomber Command. He is a North American by birth, his hometown being Windsor, Ontario. He was educated in Toronto and received his pilot training at St. Catherine's and Dunnville, Ontario. In 1944, he was commissioned into the RAF and served as a fighter/ground attack pilot in Europe until the end of WWII. He was one of the first officers to arrive in Copenhagen, to receive the surrender of the German Air Force in Denmark. After some 20 years and a very active career with the RAF, in 1968, he was promoted to Air Commodore and appointed Air Officer in charge of the newly formed Central Tactics and Trials organization of the RAF. In 1971, he was promoted to Air Vice-Marshal and appointed Assistant Chief of the Air Staff (Operations), Ministry of Defense, London. From March 1973 until November 1975, he commanded No. 1 Group (the Bomber, Reconnaissance, ECM force of the RAF) with its headquarters at RAF Bawtry.

It was while he was in command of No. 1 Group in 1974, that a team of four Vulcan bombers led by him competed in the USAF SAC Bombing and Navigation contest and against heavy odds won three of the four major trophies. This was the first occasion in the history of the competition that the RAF has beaten the USAF on its home ground.

On 29 November 1975, he was promoted to Air Marshal and appointed Vice-Chief of the Air Staff with effect from 14 February 1976, and took up his appointment as the AO-in-C RAF Strike Command and Commander-in-Chief United Kingdom Air Forces in March 1977.

Vulcan bomber crews of the Royal Air Force Giant Voice 79 Detachment

the MIDNITE RIDE OF CAPTAIN McTEER



Captain James J. Kristl
11 AREFS, Altus AFB, OK

Listen you crewdogs, and you shall hear
Of the midnight flight of Captain McTeer.
On the 2nd of April, in seventy-five,
Hardly a crewdog is now alive
Who can forget that fateful day and year.

He said to his friend, "If CEVG should alight
By land or air out of nowhere tonight,
Honk the horn in the SOF truck,
On your rounds as a signal tight.
One if by land, and two if by air.
And I on the other side of base ops will be,
Ready to sneak out and fly without care
For no one willingly flies with CEVG."

Now Captain McTeer was a commander fine,
Though he loved his women and equally his wine.
He was prepared, but of his crew unsure,
For how long does it take two butter bars to mature?
Yet he had pulled them through before,
And was just as ready to do it once more.

For any emergency, he knows all the ropes,
While the rest of the crew sits watching like dopes.
It's worked before, they're still alive,
Till the fateful 2nd of April in seventy-five.

Crew coordination was a laugh you see,
Whenever you talked to the likes of he.
Who needed a plan once the chips were down,
I can do it all myself and still go to town.

Meanwhile his friend through alley and street,
Wanders and listens with eager ears.
Till in the silence around him he hears,
The crackling of the radio on his vehicle sweet
And the words that CEVG tonight will come not,
For they are diverted by weather North to Minot.

Then he guns the motor and puts it in gear
To relay the good news to Captain McTeer.
In his excitement so joyous is he
That he honks not once or twice but three.

Inside base ops McTeer does swear,
Not only by land, but also by air!
So out to the aircraft the crew does rush
Hoping somehow to avoid a bust.
Unaware that the danger had past.
Unaware this flight would be their last.

During takeoff the plane does lose:
An engine, a generator, and one small fuse.
McTeer goes into action, no time to stew,
And his crew just watches not knowing what to do.

With checklist in hand and Dash-1 on his knee,
McTeer is truly a dazzling show to see.
First he puts the generator back on the line
Then places the throttle to cutoff in good time.
As he turns to his crew with a knowing smile,
He mentally plans to rub this one in for a while.

In his desire to handle the emergency,
McTeer has forgotten one small urgency.
The plane, it is true, has its' problems resolved
But who flew the craft while this evolved?
Not the co-pilot who is easily dazzled
Nor the pilot who is busy and frazzled.
So the aircraft, with no one to steer
Does elect to return to terra firma dear.

Captain McTeer will never get his chance to gloat,
He and his crew have missed the boat.
Their belief that with luck they could avoid harm,
Has proved rather hollow as they bought the farm.
For ignoring crew coordination is insane,
Just like forgetting to fly the plane.

I Lost a Friend Today

Capt Rick Millikin
2d Bomb Wing, Barksdale AFB

I lost a friend today. It doesn't matter that I haven't seen him for almost three years. It wouldn't even matter if I'd never met him, he was still a friend. He was a friend because he did the same things for fun. He loved his wife, his kids, his dog; he was killed doing his job. He was a pilot.

Pilot error killed this man. The mishap investigation revealed no other cause of his death. The aircraft was in good mechanical condition until it impacted the ground, splashing parts and pieces over the terrain. He was killed in a single seat aircraft. Were I to make the same mistake, with the same results, I would take at least five other crewmembers with me.

It is a sobering moment when the phone rings on a Sunday morning and the widow of a friend tells you that a planned visit will have to be postponed due to the untimely death of her husband. That's how I got the word. I'd been looking forward to seeing my friends since a combination of PCS moves had brought us back into visiting distance.

Having offered my condolences I hung up the phone. At first there was shock, then an emptiness. As I went on with my chores for the day, visions of a hypothetical crash flashed through my mind. I imagined the sudden impact, a searing flash, then the infinite permanence of death.

The family is not the only loser when there is a fatal plane crash. The loss of the airframe can be equated to a dollar cost. However, many of our airframes are irreplaceable. Each loss weakens our defense posture. The loss of the pilot or crew is also very expensive. While it may seem heartless to express the loss of life in terms of dollars, we must do so when we total up the cost of a mishap. The training invested in one individual, through pilot or navigation training, through advanced weapons system training, through PME and survival schools can exceed a million dollars. There is no way to take into account the loss of valuable experience. It cannot be easily replaced. What would it cost to replace an entire B-52 or KC-135 crew? The Air Force cannot afford losses of this kind any more than a family can.

Aircraft mishaps Air Force wide, have increased significantly in the last two years. Pilot error has been the major factor in these mishaps. As a pilot I resent having this fact thrust at me from the pages of a formal mishap report. How can anyone say what happened when there is too little left to go on? They are just trying to put the blame on someone, right? No, that's not true at all. Some very dedicated people spend hundreds of hours trying to figure out what really happened.

Pilot error is not always the only cause of a mishap. It may only be a small link in the chain of events leading to the mishap, but in some way it served to worsen the situation. It's also true that anybody can make a mistake. A mispositioned switch or misread gauge may not be significant at altitude but it can be disastrous close to the ground. A system malfunction may be a distraction from maintaining basic control of the aircraft. Any of these things may be labeled as pilot error.

Pilot error is like incurable cancer. It has always been there, but that does not mean that we should not try to eliminate it. The philosophical approach that you have to expect losses in a big operation might seem, on the surface, to be acceptable. If it is accepted, then where do we draw the line and determine that we have had too many mishaps? Can we really afford to establish a number which is acceptable? If we did, to whom would it be justified? Is any loss acceptable to the Air Force, or the major command, or the wing? What about the families? Can we justify an acceptable loss to them? Absolutely not!

As a pilot, flying safety officer, and taxpayer, I submit that the only acceptable mishap is one that did not happen. It is one that was prevented by thorough preparation, clear thinking and self-discipline. None of these preventive measures are new to any of us. We've heard them all before. There are none among us who fly in this Air Force who have not heard them from a flying safety officer. Perhaps the true meaning of these words has been lost in their repetitious use. I can't count the number of times that I have been told to fly safe, or stood in front of a captive audience at a flight safety meeting and demanded that everyone fly safe.

What does fly safe mean? It means doing anything and everything that you can to prepare yourself for every mission. It means knowing the tech orders so thoroughly that you can apply published procedures under any circumstances. It means preflighting your mind before you preflight the airplane. It means you are alert and ready to fly. When you can honestly say you have accomplished all of these things, then you are prepared to fly.

Self-discipline covers a multitude of things, but for our purposes, it means doing everything in compliance with all directives. It means controlling your emotions in flight, resisting the temptation to press just a little lower or when to quit and come home with a malfunction. Sometimes we disguise discipline by calling it professionalism. Either way, it means doing the job right.

I know my friend was a good pilot. He was very dedicated to his job and to the Air Force. He was in this particular aircraft only about a year, but had a lot of experience in similar aircraft and in a similar environment. He even had the experience of a successful ejection. Still, he went in with the plane. Perhaps there just wasn't time to eject. I wonder what was going through his mind during the flight. What factors led him into a situation from which he could not escape? Did something distract him to the point where he lost control of the aircraft? Was he pressing too hard for his experience level in the aircraft? Was he being pressured to push himself beyond his limits? We may never know what really happened. Whatever it was, it resulted in a fatality and was identified as pilot error!

How do we prevent pilot error? Simply demanding that every pilot and every crewmember fly safely isn't enough. We have been doing that for a long time but recently it seems not to be working very well. As the mishaps increase we scream louder and louder. Has something changed, somewhere, that has introduced another factor — another variable — into the completion of a mission? Has something caused crews to push themselves beyond their limits?

Experience levels are lower now than they have ever been. This might seem to be a suitable cause for the increase in mishaps. I believe it is a contributing factor, but not the only cause. Today's pilots have the best possible training. It was their instructors who earned the safety record that we enjoyed until about two years ago. I am sure they did not teach their students to take unnecessary chances.

Flying time is getting more expensive every day. We have to use every hour to our best advantage to gain the most training from it. In many cases we have to cut back on the number of hours flown in initial training. The result is that our crews are going into the field with less experience. They are participating in exercises with less experience than ever before. We use these exercises to gain experience in a realistic environment. We fly in bad weather, sometimes with system malfunctions, over rough terrain and even throw in enemy defenders for realism. The training couldn't be better, until the combined variables exceed the limits of the crew. When this happens the training stops and the battle for survival begins. Sometimes there isn't time to do much about survival. The mistake has already been made. When we lose a crew we have lost everything.

Perhaps, if we readjust our thinking, we can turn this situation around and reverse the statistics. It might mean spending still more money for additional flight hours but it would be worth it in the long run. We need to consider the long term expenses against the long term losses.

As flying safety officers, it would seem that the responsibility for correcting the situation rests squarely on our shoulders. Certainly a portion of it does. Every crewmember is also responsible for doing his or her part as well as every commander at each level of command; all must share the responsibility for what we must do to decrease the number of mishaps we are having. Our senior officers have a tremendous influence on our day to day policies for flight operations. If on-time takeoffs become more important than the condition of the aircraft or the prevailing weather then we need to reexamine our priorities. When we applaud people who make us look good by taking unnecessary risks, we are only rewarding unsafe operations.

Missions flown in times of peace, with very few exceptions, are training missions; missions which might be more beneficial for training purposes if flown another day, in better weather, with a sound airplane. We often times put pressure on pilots and crews to complete the mission, no matter what. The mission must be completed in time of war and I'm sure it will be. However, the sorties we are flying today are basically training missions and do not justify undue pressure.

Everything that we gain in pushing our crews as hard as possible can be lost in a split second. Does the short term gain justify the risk? Are we making headway in force readiness despite these losses or are we becoming more and more dependent on a diminishing resource?

GIANT VOICE 79

Continued from Page 7

A new trophy this year was the Best Interceptor Crew Award. This year's top gun award in ADTAC went to the 318th FIS, McChord AFB. The recipient was Maj Richard Lambert.

The 380th Bomb Wing received both the Saunders Trophy and the Bombing Trophy while the Russell E. Dougherty SRAM Trophy went to the 379th BMW. Winning other best crew honors were RAF 01 the Best Vulcan Crew, S-01 from the 509th BMW Best FB-111 Crew, S-152 from the 380th BMW Best KC-135 Crew, and S-01 from the 92d BMW Best B-52 Crew.

The Carl A. Spaatz Memorial Trophy was presented during the awards ceremony to the outstanding SAC air refueling unit. Lt Gen J. V. Hartinger, commander of the 12AF (TAC) presented the trophy to Col Elmer Funderburk, 307 AREFG commander. Selection for this award was by an awards board rather than through GIANT VOICE competition. The 307th can be justly proud of its outstanding achievements in air refueling support throughout the year.

In closing this year's symposium, Gen Lew Allen, Jr., congratulated all of the winners and thanked those who participated from outside of SAC, especially the Royal Air Force. He emphasized the importance of GIANT VOICE in establishing standards of excellence as well as reaffirming the vital importance of strategic bombing to the Air Force and the country.

Photos courtesy of 2BMW/AVS, SSgt Ray Decker and Sgt M. L. Walker, photographers.

Top gun (Best Interceptor Crew) went to Maj Richard Lambert 318th FIS, McChord AFB.

The top tanker crew was presented the Saunders Trophy by Gen R. H. Ellis, CINCSAC. This year's recipient was Crew S-152 of the 380th BMW, Plattsburgh AFB.

The Bombing Trophy went to the 380th BMW and Crew S-53. Presenting it was Maj Gen Earl G. Peck, SAC Chief of Staff.

Lt Gen Edgar S. Harris, Jr., 8th AF commander, presented the Crumm Trophy to the 28th BMW's Bomber Crew R-64 for best high bombing results.

On hand to present the Carl A. Spaatz Memorial Trophy to the best air refueling unit in SAC was Lt Gen J. V. Hartinger, commander, 12th AF (TAC). Receiving the award was Col Elmer Funderburk, Jr., commander, 307th AREFG, Travis AFB.

CFIC Corner

the MAG COURSE RENDEZVOUS

Captain Gary C. Jack
Central Flight Instructor Course
Castle AFB, CA 95342

ATTENTION: Tanker Nav's and Pilot's

"Nav, Pilot — How's it looking?"
"Pilot, Nav — Got him 30nm; Offset looks good."
The rendezvous continues with the appropriate range calls down to the designated turn range. Halfway through the turn you hear: "Pilot, Nav — he's at 3nm; push it up." "Roger, Nav," the pilot says, "Buff 20, Reno 75 — initiate overrun procedures at this time."

Has this ever happened to you? Or have you ever had an underrun where the receiver ended up six to eight nautical miles (nm) behind you? Afterwards, you just couldn't figure out what happened and passed it off as "just one of those things." More often than not, the cause for either an overrun or an underrun is the failure to establish and maintain the proper offset and then to turn at the proper turn range. In this article, we'll take a look at establishing and maintaining the desired offset. We'll examine four radar techniques: three commonly used techniques and their limitations; and a fourth technique, referred to as the mag course technique, and its advantages.

There are three radar methods commonly used: leaving the radar picture stabilized to true north; stabilizing the picture relative to the nose of the aircraft; and what is commonly referred to as the "track-up method" where the top of the scope represents the nose of the aircraft and any drift is "killed" by the heading flash. All three of these techniques will get the job done, but there are some limitations associated with each. First, every time the aircraft alters to establish or maintain the proper offset the radar scope presentation also changes (this is true with the relative and track-up methods). When this occurs, the reticle's value for visualizing the offset on the radar picture diminishes as the size of the alter increases, and the "WAG" or "TLAR" method is used to determine the offset. More often than not the proper offset is not established and the entire procedure must be repeated. With the scope oriented to True North it is extremely difficult to even "WAG" the offset due to the inability to rotate the reticle to approximate the offset.

The mag course technique can eliminate those limitations for establishing and maintaining the proper offset. To show this, a description of the procedures is necessary. First, apply variation to the receivers inbound track and subtract 180 to obtain a reciprocal magnetic course to the receiver's inbound track. Another way to establish your mag course for the rendezvous is to determine your true track for the rendezvous and apply variation. The important

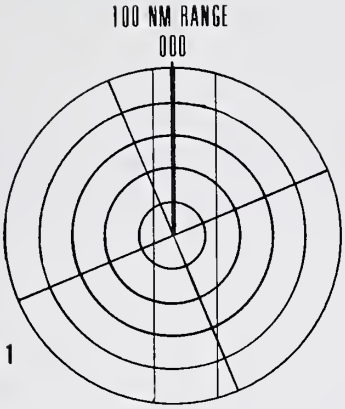


FIGURE 1

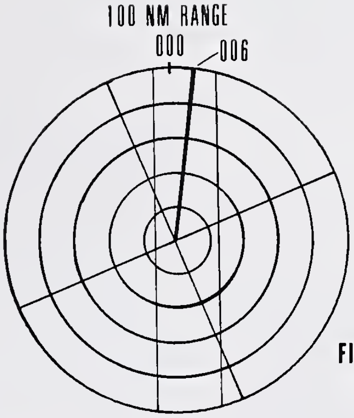


FIGURE 2

point here is to make sure you're flying the reciprocal to the receiver's inbound track. While you're turning toward the receiver for the rendezvous, leave the bearing switch in stab and rotate the heading select knob on the APN-59 to your desired mag course. Once you're heading toward the receiver, compare the N-1 reading to your desired mag course. If there is any difference between the two, adjust the heading select knob until that difference is reflected at the top of the scope between 000 and the heading flash. It is important to note here that no mention has been made about drift. If the drift is known, by all means apply it to your mag heading to help maintain the offset once it is established. Any corrections for drift will be accounted for when you compare the N-1 and the desired mag course as previously mentioned. This aligns the top of the scope to your desired mag course, and any corrections to the offset will be relative to the receiver's inbound track. Next, the reticle must be set to the proper offset. When these three steps are complete, you're ready to direct the rendezvous.

If the receiver's beacon is not tracking down the reticle appropriate corrections should be made. The real advantage of the mag course technique is that the radar gives a continuous display of the receiver's offset in relation to the planned mag course, and any alters to establish the offset do not change the orientation of the radar scope. When corrections to the offset are necessary, make a "healthy cut" (approximately 30°) toward the offset to get established as soon as possible. This is very important because if you're flying a significantly corrected heading to get on the offset at the desired turn range, then the computed turn range and offset won't be totally valid because of the increased or decreased amount of the required tanker turn to refueling heading. An example might clarify this technique.

You're holding at the ARCP and when radio contact with the receiver is established all the applicable information for the rendezvous is relayed. The receiver gives you his inbound track of 270 and a turn range and offset of 23/12. By applying local variation (let's say 15°) you determine his inbound magnetic course will be 255°. Next, you subtract 180 from his inbound mag course to determine your desired mag course for the rendezvous of 075. Now using your heading select knob, set in 075. As soon as you're rolled out you compare the N-1 to your desired mag course.

If the pilot rolled out on a heading of 075 the heading flash should fire at 000 in the scope. (See Fig. 1) Since we always have some wind, you want to compensate for it with, let's say, 4° R correction and apply this to your mag heading. To further compound the situation, the pilot rolled out at 081 instead of your drift corrected heading of 079. Don't worry about it. Just compare the N-1 (081) to your desired mag course (075) and adjust to heading flash accordingly. In this case the heading flash should fire at 006 and the scope will still be oriented to your desired mag course. (See Fig. 2)

Now that the scope is properly oriented you set your reticle at 12 left and positively identify the receiver's beacon at 65nm but at an offset of eight instead of 12. Immediately you correct a minimum of 30° right to establish the offset. When the receiver's beacon touches the reticle, correct to a drift corrected heading of 079 to maintain the offset. If any subsequent corrections to offset are required the same steps are followed.

During the rendezvous you rotate the cursor to intercept your offset at 23 nm and when the receiver's beacon hits the designated turn range and offset you start your turn back up track and roll out 3 nm in front of him.

The mag course technique may seem a bit confusing at first, but it has proven very effective for two main reasons. First when properly configured, the radar gives a continuous display of the receiver's offset in relation to the planned mag course. Secondly, it makes correcting to establish and maintain the proper offset an exact process, thus eliminating the "WAG" or TLAR methods.

If you have any questions concerning the mag course technique, give us a call at CFIC or talk to a CFIC graduate. We'll be glad to answer anything dealing with this technique or any other question you may have.

CAN YOU KEEP A SECRET?

Robert L. King
Lt Col
HQSAC/DORC

Just because you don't tell anyone about your secret doesn't mean they don't know about it. How did they find out? That is a question that has plagued security managers since day one. Millions of dollars have been spent developing encryption devices that would let us talk to each other without the "Bad Guys" listening in. Tons of paper posters, signs and labels have been printed since military operations began, to remind us not to discuss classified here, there and elsewhere. All of these efforts certainly have merit and are necessary, but they are directed at only the *obvious* weaknesses in a good security program, COMSEC and TRANSEC — the exchange of information, either by machine or verbally.

Did you ever sit on a three legged stool with one leg very weak. Two legs can be made of steel but you can still fall on your face. Operations security is like that three legged stool with one leg that needs some attention too. We've got good names for two of the legs, COMSEC and TRANSEC but what about the third. The weakness in that leg is so subtle we don't even have a name for it. For want of an acronym lets call it PROSEC — Procedures Security. Now, lets put some definition to this insidious beast that threatens our security.

Let's say that "PROSEC" is applicable to any practice or procedure when observed by a trained intelligence collector could reveal the ultimate purpose of the individual(s) involved. That is a mouthful. Here is a simple example: When you leave your house at night you lock up and turn on the porch light. You never tell anyone you're leaving but everyone knows when you're gone. Simple deduction, right? How about every time you have a bombing mission over Hanoi you loaded at 0130Z. Doesn't take a genius to tell where your going after you do it a few times. Those are very simple examples but what about other "simple" things that you may be doing to tip your hand that are unique to "special" operations.

There are three principal culprits in the procedures security category that lead us headlong into a weak security posture without recognizing that we are there.

One, stereotype operations. "The monotony of routine is the validation of predictability". The old cliche "we did it before and we can do it again" usually means it will be done the same way. The second prong of the stereotyping security threat is that once we do fall into a routine, any deviation to that routine, such as a special operation, immediately tips off interested agencies to be alert for something new.

Two, a lack of awareness of this subtle threat by those charged with writing directives, standard operating procedures and other procedural guidance. We all carefully review documents to insure that they are properly classified, paragraph by paragraph. But how often are they reviewed to determine whether the procedures they establish will reveal the nature of the operation. Example: A secret paragraph from an operational directive for a certain type mission read:

"When scheduled for a flight that will overfly unfriendly territory a handgun is required. Guns will be issued to all crew members between 1400 and 1600 hours on the day prior to scheduled mission. When obtained the crew member will-etc., etc."

Continued on Page 27

OPS HAZARDS

BAGGING THE BIRDS

Hunters and SAC pilots have something in common. Both groups were bagging birds in large numbers during the fall of 79 and both groups were expending large amounts of money doing it. Everyone knows that fall is the waterfowl migration season and October is probably the best month to bring these birds down. So, with this in mind, let's look at SAC's birdstrike experience for October 79.

There were 17 SAC birdstrike mishap reports submitted during October. Twelve of these were B-52 aircraft and five were KC-135s (including two Air Reserve Forces aircraft). There were no FB-111 or other SAC aircraft involved in birdstrikes that month. The costs were in excess of $30,000 for tankers and $80,000 for bombers (the cost for one bomber is still pending).

Bombers in low level routes accounted for nine strikes while five occurred during landing or traffic pattern operation. One strike was encountered on take-off roll and the remaining two were unknown hits.

The majority of the birdstrikes were to engines or engine areas. Most were ingested and others damaged ring cowls and inlet guide vanes. In many cases, no noticeable loss of engine performance was noted. Other birds struck radomes and wings areas. One even broke the FLIR turret window of one bomber. Many cases involved multiple strikes from large flocks of birds and one aircraft reported 57 hits. Only two cases reported a bird striking a cockpit window. This does not mean pilots should feel at ease. Proper precautions must be taken at all times when aircraft are flown near the ground. Let's face it, that's where the birds are, and from our analysis pilots are not immune to strikes even in the local area.

The Bird/Aircraft Strike Hazard Reduction Program is an on-going effort by the Air Force and SAC to reduce the potential for damaging birdstrikes. Crew-members must use the recommended procedures for protection during the phases of flight where birdstrikes are most likely to occur.

Remember the spring migration is just ahead, and since hunters won't be bagging birds during this period, we hope the SAC pilots won't either.

How many pilots have found these thoughts running through their minds after their engines coughed and sputtered and their airplane began gliding unpowered through the air?

We've all heard such stories; but they were usually about some fighter pilot's inattention to fuel status. For those of us who fly the heavies with enough gas to go halfway around the world, the possibility of running out of gas on a routine tanker task force deployment seems very remote, right?

Wrong! Not too long ago, the following situation occurred. A KC-135 crew on a task force mission were subjected to a sequence of events that left a forward body tank error undetected until the aircraft was over the North Atlantic Ocean, 1000 nm from land.

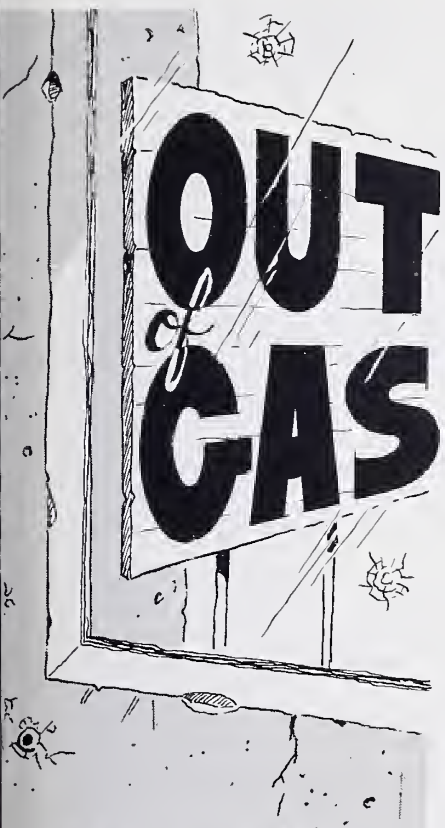
The crew started engines following a normal preflight. The forward body gauge indicated 17.8M pounds with a normal "press to test." The scheduled full load was 155M pounds and the nose gear strut was at normal extension for this fuel load.

As the tanker took off, the rotation was normal but incurred a slight jump into the air at or about the same time the aircraft completed rotation. Nose down trim was required to maintain the normal four engine climbout speed.

Fuel in the center wing was burned during climbout and into the ARCP. The angle of attack was 0.2 and trim was 0.5 nose down. At two hours after takeoff the aircraft entered the orbit at the ARCP and 7.5M pounds were transferred into the forward body to give 25.0M pounds in that tank, 30.0M pounds in the aft body and 12.2M pounds in the center wing (approximately a 27 CG).

The crew then started down the air refueling track burning the main wing tanks, and while offloading a total of 12M pounds to three fighters, this took nearly all of the fuel from the aft body. Later, after the fourth air refueling the forward body indicated 23.5M pounds, center wing 10.0M pounds and aft body 19.5M pounds. The AOA indicated .2 at 315 KIAS. The trim had continued nose down so the crew drained the reserves. Starting AR number five, the trim was 1.3 units nose down with the reserves empty. The approximate CG was 22.5 based on the fuel indicated in the tanks. The crew offloaded 5.5M pounds from the forward body and 5.0M pounds from the aft body for AR number five.

After refueling, the forward body indicated 18.0M pounds, the center wing 10.0M pounds and the aft body



Maj Patrick G. Richmond
Capt Stephen C. Daniels
Loring AFB

14.5M pounds. Since the reserves were empty, 4.5M pounds was transferred to the forward body for the next air refueling. The AOA still indicated .2 at 315 KIAS. For the next air refueling, AR number six, the configuration was forward body 22.5M pounds, center wing 5.5M pounds and aft body 14.5M pounds. The crew offloaded 2.5M pounds from the forward body and 9.5 from the aft body. The trim at EAR number six was 2.0 nose down but the boom operator computed an extremely forward CG (approximately 16.0).

The trim remained at 2.0 nose down when the airspeed was reduced to 285 KIAS. The crew started to burn from the forward body when the boom operator insisted there was an extremely forward center of gravity. The copilot pressed to test the fuel gauges which tested normally (winding down to approximately 0) except the forward body which stopped at 11.7M pounds. The fuel quantity indicated in the wing tanks was marked and the crew continued to burn the forward body. When the forward body indicated 17.5M pounds, fuel began to burn from the wing tanks. When attempting to dump from the forward body, the boom vented fuel for 20-25 seconds and then stopped. The AR pump low pressure lights were both on during the fuel dump operation. The trim remained at 2.3 units nose down. The crew again drained the upper deck and reconfigured the fuel panel to burn the 5.0M pounds out of the aft body.

The crew estimated the forward body was empty and decided to divert into Gander, Newfoundland, (approximately 640 miles and one and one-half hours from destination). The center wing fuel was transferred forward making the gauges read 21.5 forward body (estimated 4.0) and 0.0 in the center, aft upper deck and reserves. Final approach was flown at 128 KIAS while maintaining the AOA at .6. This tended to confirm the estimated gross weight of 135.0M pounds. The trim was 3.0 nose up with a fuel configuration estimated at 4.0 forward body, center wing 0, aft body 0, upper deck 0, reserves 0, outboards 4.0M pounds and inboards 5.5M pounds.

After landing at Gander, the crew uploaded 20M pounds into the center wing and distributed 11M pounds evenly in the wing tanks. The forward body gauge and the aft body gauge were swapped to check for gauge problems. The gauges operated normally and were returned to their previous positions. The forward body tank gauge circuit breaker was pulled and the crew prepared for a return flight to Loring.

After landing at Loring, fuel was offloaded from the forward body by hand. Approximately 3.0M pounds of fuel was in the tank. AMS specialists still obtained a normal press to test on the forward body gauge. The electric shop discovered a broken wire connecting the compensator lead to the forward body fuel gauge. The zero reference had moved to 17.5M pounds, coincidentally the same as the required fuel load for the task force mission.

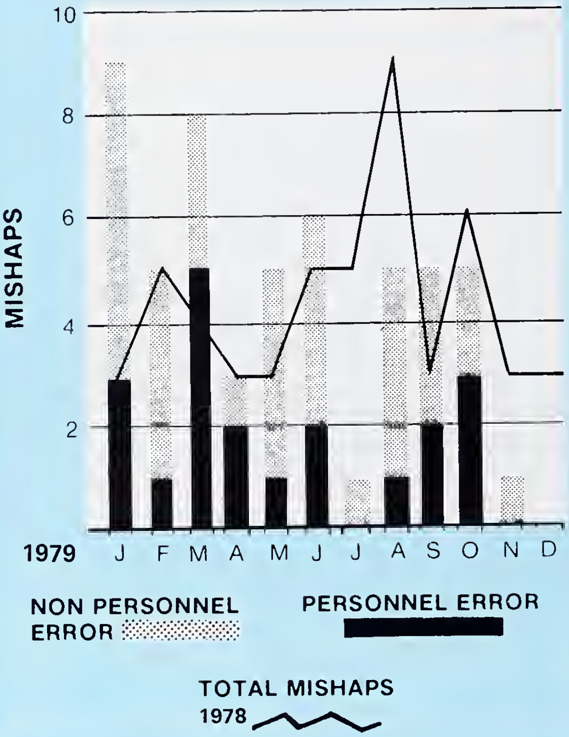
A unique occurrence? A one in a million chance? Perhaps. yet, recently there was another fuel indicator malfunction incident. The mission was normal through the initial takeoff roll. During rotation the aircraft did not respond normally to control inputs. After an increase of approximately 12 KIAS above the computed rotation speed the aircraft became airborne, but felt sluggish. The controls did not feel normal until approximately 200 KIAS. No further problems were noted until the center wing fuel was burned down to 4M pounds. The crew drained the center wing fuel forward but noticed 6M pounds of fuel had drained forward so they closed the drain valves. After air refueling the fuel panel was configured to drain forward and burn the center wing fuel in 5M pounds increments. The crew found 26,500 pounds of fuel that had not been indicated on the tank gauges or on the fuel forms.

There are several valuable lessons to be learned from these two incidents, but one seems to stand out. Pay attention to how the aircraft feels versus how it would react to control inputs. Years of experience teach a pilot so many things that a catalogue of them would fill volumes. A lot of this experience could be categorized as good air sense or knowing how the aircraft feels in flight. In the two examples, abnormal aircraft performance provided clues to problems in the fuel configuration of the aircraft. In the first example the "nose light" feel of the aircraft was confirmed by trim indications and later led to the discovery of an unreliable forward body fuel gauge. In the second example the aircraft felt sluggish and heavy and the crew later found excess fuel in the center wing tank.

Hopefully all future material failures on your aircraft will be recognized using the other crosschecks the aircraft provides. Use all your crew's experience and even request help from the ground if you need it. But don't die believing something's not wrong just because some gauge says it's not. The gauge may be as wrong as are you, dead wrong!

Missile Mishap Report

DOD CLASS A, B and C



DAMAGED HYDRAULIC FLUID LEVEL TESTER

An individual was performing hydraulic fluid check (-6) on a SRAM launcher. During this check, a missile was found to be low on hydraulic fluid. The individual left the area to obtain fluid without informing anyone that his testing was incomplete and that the fluid level indicator was protruding approximately eight inches from rear of missile. Meanwhile a post download inspection was begun without performing precautionary steps and the launcher was rotated. Upon hearing an unusual sound an immediate investigation revealed that the hydraulic fluid level indicator was lodged against the launcher frame. Damage consisted of a bent hydraulic fluid level tester, stripped threads on the reservoir and a dent in the sheet metal of the fairing assembly. A lack of communication between maintenance technicians, failure to perform the precautionary steps of the applicable checklist and the fact that 316X0 personnel were rotating the launcher in the IMF, rather than 463X0, all played a role in this missile damage.

FA 5290 FILTER FAILURE

A loss of commercial power was experienced at a Titan complex. Investigation revealed all three phases of the output side of the filters were blown. Two previous filter failures have been reported and they all involved filters reconditioned by the depot. All of these filters have been removed from five complexes and sent to McClellan for rework which consists of modifying the feed-through capacitor located within the filter. Re-installation of these filters began in the month of December. In addition, a new filter is being designed which will be available in about 12 months. The new filter will not contain PCB.

DAMAGED BATTERY

An electro-mechanical team (EMT) performed a battery change at a launch control center. Upon completion, the W044 cable was not connected to J-03 on the power supply group. When a loss of commercial power was experienced 26 days later, the motor generator wound down. The W044 cable was found disconnected and high voltage was present in two batteries. One battery was condemned. Personnel failed to perform the required step of connecting this cable during replacement of the battery. A caution will be added to the technical order to warn of the results when the W044 cable is not connected.

PAYLOAD TRANSPORTER VAN CABLE CONNECTOR

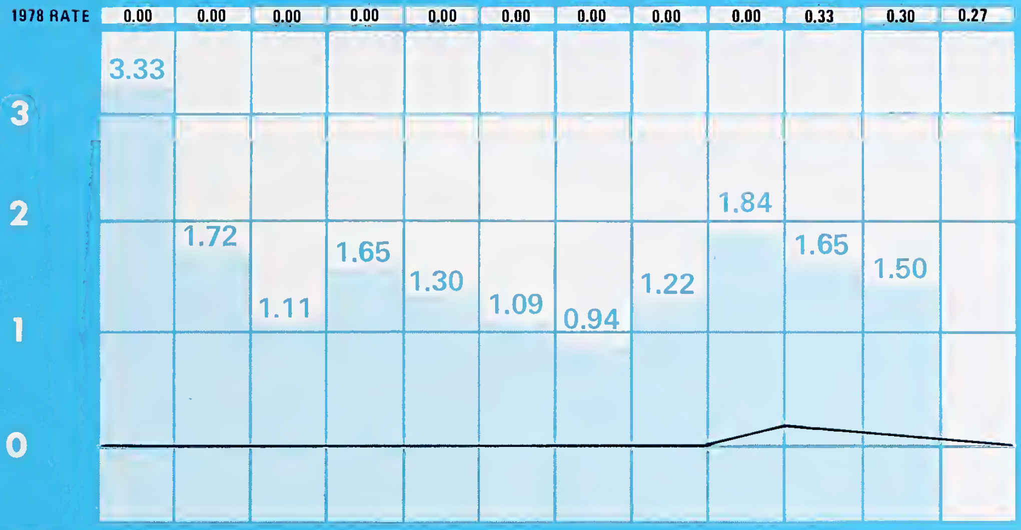
A missile maintenance team (MMT) member was repositioning the payload transporter van during a missile guidance set replacement. The transporter was moved from the launcher closure door with the site power cable connected to the site cable connector. The result was separation of the cable. The driver and spotter failed to insure the site power cable was properly stowed. The driver was not a qualified PT van driver and a lack of supervision was evident in this mishap.

MOTOR GENERATOR FAILURE

A motor generator at a launch control facility failed due to loss of cooling air to the set. Upon cutting a hole in the cooling duct, a heavy compacted dust film and grease were removed that had completely obstructed airflow to the motor generator. Current technical data does not specifically address checking airflow between pressure plates on a timely basis or when the motor generator fails due to overheat.

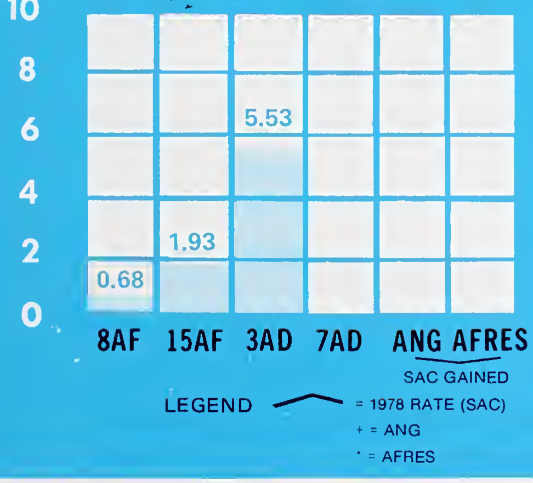
1979 Flying Safety Rate

SAC CLASS A MISHAP RATE (PER 100,000 FLYING HRS)



MISHAPS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1978	0	0	0	0	0	0	0	0	0	1	0	0
1979	1	0	0	1	0	0	0	1	2	0	0	0

1979 SUBORDINATE CMD RATES



MISHAP STATUS

B-52H	JAN 79
KC - 135Q	APR 79
RC - 135	AUG 79
FB-111	SEP 79
KC-135	SEP 79

BIG INSTRUMENT

QUESTIONS and ANSWERS

Capt Tome H. Walters, Jr. and
Capt John Ondrejko
1CEVG Instrument Division
Barksdale AFB, Louisiana

1. While taxiing for takeoff, you receive this clearance: "Climb and maintain FL250. Cross the 12DME fix at or below 4,000 ft." Just prior to takeoff, tower advises "Climb and maintain FL210." Does the 4,000 ft restriction still apply?

2. Your takeoff clearance reads "Climb and maintain FL250. Cross the 12DME fix at or below 4,000 ft." On your initial airborne radio contact, departure rogers your call and says "Maintain FL250." Does the 4,000 ft restriction still apply?

3. You are level at 4,000 ft on a radar vector to a TACAN final. The final appraoch fix (FAF) altitude is 3,000 ft. Approach control turns you to an intercept heading and clears you for the approach. When can you depart 4,000 ft?

4. Are you required to make a radio call when you depart 4,000 ft?

5. If you were being vectored at 4,000 ft to a TACAN final and the FAF altitude was 4,000 ft, should you call departing 4,000 ft to approach?

6. When flying a radar approach, when will USAF controllers give missed approach instructions?

7. True or False. Clearance for a published instrument approach includes clearance for the missed approach procedure published on the IAP. (No other instrument instructions are received).

8. Prior to an ILS low approach, the controller advises "After completion of the low approach, climb and maintain 4,000 ft, turn right to 090°."

   a. Should you call "missed approach" once you are following these instructions?

   b. Do you have to be level at 4,000 ft before you can turn to 090°?

ANSWERS

1 and 2. No, the 4,000 ft restriction does not apply. We took the following note verbatim from the Air Traffic Handbook: "Restating previously issued altitude to 'maintain' is an amended clearance. If altitude to 'maintain' is changed or restated, whether prior to departure or while airborne, and previously issued altitude restrictions are omitted, altitude restrictions are cancelled, including SID altitude restrictions, if any."

3. When you are established on a segment of the approach. Since the deletion of the 2½° on course criteria, the pilot is now, more than ever, required to stay position oriented to determine when he/she is established on approach. Paragraph 6-15 in AFM 51-37, Pilot Responsibilities during Radar Vectors, is less than half a page long. Five minutes spent rereading it would be time well spent.

4 and 5. Yes. FLIP General Planning, para 5-21 a(d), says call "when vacating an assigned altitude when cleared for approach."

6. Not until you begin the missed approach and request further clearance. (Check AFM 51-37, para 6-24e.)

7. True. Note that we emphasized that no other instructions have been received that would take precedence over the published instructions.

8.a. No. The controller — issued instructions are "climb-out" instructions. 51-37 says "Do not use the term 'missed approach' if you are following 'climb-out' instructions, since the airspace and air traffic procedures involved in the two maneuvers may be different." Paragraph 6-24f(2) says "Notify ATC that you are initiating 'climb-out' . . ." If that strikes you as slightly vague, you might try repeating your instructions back on the call-up; e.g., "Approach, Sapsucker 96 is climbing to 4,000. Request vectors for a PAR for the option."

8.b. No. When you follow climb-out instructions, you are expected to delay any turns until past the departure end of the runway. But you don't have to reach the altitude before you turn. If the controller wants you to hit the altitude before turning, he/she should phrase the instructions to make that clear, e.g., "Climb to 4,000, *then* turn right to 090°." Obviously it's important to listen to the controller's instructions. As always, when in doubt, ask.

If you are not clear about "missed approach" versus "climbout", check AFM 51-37 para 6-24. It's the first paragraph in SECTION H — MISSED APPROACH.

Since no test is complete without a grading maze:

Number Correct	
0-4	Your next evaluator is a prohibitive favorite (the Greek would say).
5-7	Use 1000/3 for your personal minimums.
8	Call 781-3648. We have some questions we'd like to ask you.

KEEP A SECRET

Continued from Page 20

All properly classified, yet when the first crew member got his weapon he effectively announced that a mission would be going the next day. Where is the security weakness? Certainly not with the crew, they are following directives; not with the commander, he wants his crews armed; not with the weapons people, he has to maintain rigid control on weapon issuance and he probably doesn't know anything about a mission scheduled. You pin down the culprit. Could it be convenience?

Now to culprit number three. A myriad of seemingly insignificant things that could very well be one of the biggest contributor to a poor OPSEC (COMSEC, TRANSEC and "PROSEC") posture. Convenience is only one. Expedience is another and closely related and very deadly. The higher the rank involved, the more people get subjected to the "expedience factor". A requirement for information by a worker gets routine and generally proper handling but when a senior supervisor asks for some info the workers start cutting OPSEC and COMSEC corners to get the info ASAP. Who is going to take an extra 10 minutes to get a secure line when the boss is waiting for an answer? How many times have you been put in that position or how many times have you put your workers in that position? Patience just might save a secret!!

Ego is another significant cause for OPSEC weaknesses. We all like to think we're smarter than the next person, and often we are when we know something they don't. But the only way we can prove we are more smart is to tell someone what we know. Not only is the need-to-know security practice compromised but you are then no longer smarter than someone else. So what have you really gained?

Because of tremendous improvements in intelligence collection technology and capability, the ability to deny an enemy information on our operations is becoming increasingly more difficult. This is especially true if he targets one of our specific operations. We must establish a security awareness posture that avoids tipping him off that we do have a secret to hide and then avoid doing things that would confirm his suspicions or any information that someone else may have inadvertently passed on to him.

Security Awareness is a very passive and hollow term. You can be aware of rain coming down but if you don't put on a raincoat you get wet. *Security Practice* takes *action* against this always present threat to your secret.

Now, can you *really* keep a secret??

PROFESSIONAL PERFORMERS

Individuals selected for these pages as SAC's top professional performers of the month are chosen from nominations made by all SAC units. Selection is made only after all nominations have been carefully screened and those chosen meet the highest standards of excellence outlined in AFR 127-2/SS1.

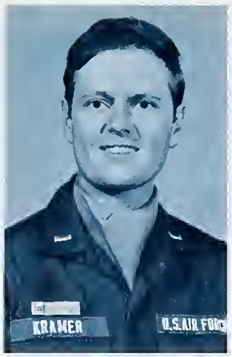
SAFETY OFFICER

Capt Richard J. Grove, as additional duty Ground Safety Officer for the 24th SRS, Eielson AFB, displayed dedication and motivation during the period, June through August 1979. He voluntarily served as the Wing Chief of Safety/Flying Safety Officer, during that time and investigated two Class C mishaps, trained mishap board members, prepared and presented monthly safety meetings, and maintained a vigorous spot inspection program. He accomplished all of these actions while performing his normal crew duties as an electronic warfare officer aboard an RC-135S aircraft. Capt Grove also prepared and presented a briefing on the wing's safety program to 15AF/CC. This briefing, at the request of the 15AF Safety Office, was distributed to all other 15AF safety units. Capt Grove well deserves recognition as the SAC Safety Officer of the Month.

TITAN Crew E-141, 381 SMW, McConnell AFB: MCCC 1Lt Michael P. Dulinawka; DMCCC 2Lt John H. Yancey; BMAT A1C Frederick R. Spreeuwers; and MFT Sgt George R. Moore.

TITAN CREW

Missile Crew E-141, 381st SMW, is named Titan Crew of the Month. The members of this crew demonstrated superior system knowledge during a recent hazard at a Titan II missile site. While on duty at a unit complex, they encountered a fire hazard in the silo equipment area. Amn Spreeuwers and Sgt Moore were performing the necessary steps of daily shift verification (DSV) on level 2 when they saw smoke coming from the board mounted panel (BM-3) of water chiller 103. Returning to the control center, they informed the crew commander and entered the fire manual checklist of T.O. 21M-LGM25C-1. In compliance with the hazard checklist, they were dispatched into the silo wearing self-contained breathing apparatus (CHEMOX). Noting that the smoke and fire still existed, they proceeded to level 3 to deactivate the circuit breaker in the motor control center panel (MCC-1). Returning to the BM-3 panel, they observed that the smoke had dissipated and that there were no signs of a hazard. With the concurrence of the missile potential hazard team (MPHT), the hazard was terminated. The expedient manner with which Crew E-141 implemented this checklist was favorably noted by the MPHT for they had prevented the fire from damaging the other two water chillers. The loss of this equipment would have affected the entire cooling water system in the complex and possibly downgraded the sortie's readiness status. Crew E-141's professional approach, and leadership warrant their selection as Missile of the Month.



MINUTEMAN CREW

Minuteman Crew E-144, 91st SMW, Minot AFB, composed of 1Lt Scott W. Westfall, MCCC; and 2Lt David V. Kramer, DMCCC, is named Crew of the Month. While on alert at their LCC, a vendor arrived topside. The vendor backed his vehicle into the unleaded fuel tank and severed the nozzle. The tank contained 510 gallons of fuel. Upon being notified of the incident, Lt Westfall initiated the contingency checklist. Due to the danger of an explosion, the crew evacuated the topside except for the FSC and the facility manager. A 2000-foot cordon was established and Bowbells, N.D., fire department was called on to flush the fuel spill. The crew then directed the FM to plug the fuel leak to limit the amount of loss of fuel, and asked a Bowbells fuel distributor to come to the site and pump out the remaining fuel. After determining that the danger of explosion was eliminated, the cordon was terminated and the topside personnel were returned to the site. The fuel tank was repaired later in the day and the fuel returned. Quick action by the crew limited fuel lost to 40 gallons. The mature and professional manner in which the crew reacted prevented possible serious injury to the topside support personnel and limited the loss of expensive USAF fuel resources.

MAINTENANCE NCO

SSgt James W. Simister, 97 OMS, Blytheville AFB, is named SAC Maintenance NCO of the Month for his outstanding technical competence, initiative, leadership and training abilities. While serving as a B-52 crew chief, SSgt Simister achieved an enviable record. Through his technical expertise and efforts, his aircraft was constantly maintained in a mission ready status. His perseverance enabled his aircraft to amass a record of 32 consecutive on time takeoffs and to meet all alert commitments from 1975 through the end of his tenure as an aircraft crew chief in April 1979. Due to SSgt Simister's exceptional qualifications and the superior reliability and appearance of his aircraft, both he and his aircraft were selected to represent the 97 BMW in the 1976 SAC Bombing Navigation Competition. In order to more fully utilize his remarkable abilities, SSgt Simister was assigned as the Bomber Branch Training NCO. In this capacity, his maintenance proficiency and education were drawn on to resolve serious training problems identified by the Maintenance Standardization and Evaluation program. SSgt Simister is a dedicated noncommissioned officer and a valuable asset to the SAC maintenance function and the United States Air Force.

FLYING CREW

Capt Brent Leveille and Crew E-23, 22 BMW, March AFB, are named Combat Crew Magazine "Professional Performers" of the month. This award is based on their performance during a recent inflight emergency in which the actions of Crew E-23 contributed directly to the prevention of loss or damage to a B-52 and the prevention of injury or death to the crewmembers. While flying the low level portion of a recent B-52D training sortie at night below an overcast, Crew E-23 encountered multiple AC power failures. Dash-1 procedures to restore power were implemented immediately and the pilot initiated a climbing right turn to abort the low level route. During the climbout the aircraft experienced total AC power failure limiting the pilot's instrumentation to "needle, ball, and airspeed." While flying through the overcast, the airspeed indicator failed at zero. Still in the weather, the aircraft entered a 3000-4000 fpm rate of descent before the wings could be leveled using needle and ball indications. A gradual climb was re-established. Soon afterwards, AC power was restored allowing the pitot heat and airspeed indicators to function normally. The aircraft was recovered without further incident. The professional performance of Crew E-23 under the most demanding conditions was directly responsible for saving a valuable aircraft and the lives of the crew.

COOPERATION

the key to successful mission accomplishment

Capt Kenneth Grove
308SMW, Little Rock AFB

Cooperation, full cooperation, is the standard between the 308th Strategic Missile Wing and Detachment 4 of the 37th Aerospace Rescue and Recovery Squadron.

While the mission of the 308 SMW is nuclear deterrence, the mission of Det 4 is using their helicopters to support the 308 SMW's mission.

During the winter months, helicopter use is crucial. When the many rural winding roads become snowbound, the only route to many of the complexes is by air. Crews are ferried along with maintenance technicians and parts. At the complex the whirling blades of an approaching helicopter are a welcome sight in the winter when crews may sometimes be forced to spend an extra day on duty because of weather conditions.

Det 4 also plays a vital role in providing security in the missile field. Armed 308 SMW Security Police members can be quickly airlifted to handle security problems. In addition, when the missiles must be moved, Det 4 provides aerial surveillance along the entire route.

Probably the most dramatic aspect of Det 4 support is during emergencies. For example, if a crewmember is injured or becomes ill while performing alert duty, a relief crewmember is flown out as quickly as possible.

Helicopter support is critical to transporting the maintenance people and their equipment during emergencies at the various complexes. Handling of emergency situations further demonstrates the outstanding cooperation which exists at Little Rock.

The 33 members of Det 4, including the nine pilots assigned, are constantly involved in maintaining both their proficiency and the condition of their three Hueys. Their facilities are immaculate, a symbol of the pride each individual has for his/her organization and mission.

The day to day cooperation between these SAC and MAC personnel shows conclusively that the business of maintaining the country's defense even in the strategic arena is a combined effort. People such as those in Det 4 may not be in your wing, or crew, or in the same command; but they are still mission essential.

DEBRIEF

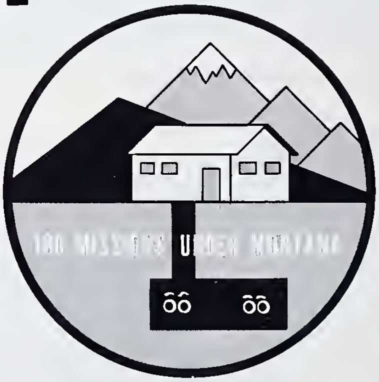
Aces of Ace

Recently in DeBrief an ACE copilot was highlighted for an unusually high sortie count. I would like to take this opportunity to give credit to these copilots of the 2nd BMW of Barksdale AFB. They too have put forth an effort in the ACE program.

Capt Albert W. Day 362 sorties, 62d BMS
Capt Perry L. Lamy 377 sorties, 596th BMS
Capt Stephen D. Zahn 393 sorties, 596th BMS
—Capt Nathan Y. K. Uyehara, 14FTW/OLA

Alert Achievement Award

An Alert Achievement Award has been established at Malmstrom to give proper recognition to Missile Combat Crew members who do their jobs day in and day out to the best of their abilities and really never receive the proper recognition they deserve. The Alert Achievement is a specially designed patch. It honors crewmembers who have pulled 100 alerts with a special arc tab for those crewmembers who have pulled 200 alerts. Establishment of the award was a direct result of a Project Enhancement Program and is an incentive to crewmembers creating a more positive attitude toward alerts and fostering unit pride and morale. — 1Lt Robert H. Krause, 10th SMS.



SAC SAFETY SCREEN

340 AREFG, Altus Crew R-120: P Capt Arthur Ericson, CP Capt Carl P. Rambo, N Lt John M. Smilek, BO TSgt George S. Miller

2 BMW, Barksdale Crew E-07: P Capt Michael E. Gentry, CP 1Lt Thomas E. Stickford, RN Capt Charles K. Geiger, NN 1Lt Timothy B. Vigil, EW 1Lt Joseph S. Butler, AG Sgt Kevin J. Kranenberg

2 BMW, Barksdale Crew E-84: P Capt Grover E. Myers, CP 1Lt John D. Harris, RN Capt Robert S. Rife, III, NN 1Lt Robert A. Sberna, EW Capt Robert Jackson, Jr., AG Sgt Kenneth J. Decaluwe

2 BMW, Barksdale Crew R-157: P Capt Gordan L. Bendick, CP Capt Allan W. McElroy, NN Capt Daniel Mahrer, BO Sgt Donald A. Busscher

2 BMW, Barksdale Crew R-113: P Capt David N. Bosserman, CP Capt David C. Shields, NN 1Lt Wesley M. Smith, BO SSgt Gene W. Brantley

4018 CCTS, Carswell AFB, TX: IP Capt Thomas L. Smith, IRN Capt Jim M. Taylor, IEW Capt Gerald W. Epperson, IS TSgt Douglas U. Bradshaw

320 BMW, Mather Crew E-17: P Capt Robert P. Ullman, IP Lt Col James P. Guglietti, RN Capt Brian M. Weisel, N 1Lt James W. Lamb, EW 1Lt Joseph E. Spivey, AG SrA John T. Morrow

28 BMW, Ellsworth Crew R-56: P Capt Michael J. Willis, CP Capt Arthur J. Kenney, RN Capt Vernon E. Waymire Jr, N 1Lt Bruce L. Jeffrey, EW 1Lt Bruce R. Troxel, AG SSgt Howard A. Verrett

319 BMW, Grand Forks Crew S-02: P Capt Jeffrey C. Hartig, CP 1Lt William J. Vacek, NB Capt Harry B. Fitzpatrick, NN Capt Phillip W. Gronseth, NE 1Lt Michael E. McIntyre, AG SSgt Roger M. Benefield

22 BMW, March Crew R-112: P Capt James H. Evans, CP Capt James A. Bouska, NN 1Lt Thomas J. Solecki, BO A1C Charles E. Newton

92 BMW, Fairchild Crew E-164: P Capt Paul M. Guttman, CP 1Lt Philip A. Vollelunga, N Capt Michael D. Brashear, BO TSgt Scotty M. James

93 BMW, Castle Crew IT-73: IP Capt William D. Russell, IN Capt Richard A. McGregor, IBO SSgt Mark A. Gentry

44 SMW, Ellsworth Crew R-184: MCCC 1LT Rodney A. Hottle, DMCCC 2Lt Mark C. Turner

321 SMW, Grand Forks Crew E-010: MCCC Capt Mathew E. Weslow, DMCCC 2Lt Charles L. Boyle

341 SMW, Malmstrom Crew E-064: MCCC Capt Charles W. Hankins, DMCCC 2Lt Gary J. Gore

351 SMW, Whiteman Crew R-073: MCCC 1Lt Larry K. Shed, DMCCC 1Lt Kenneth S. Wood

The SAC Safety Screen is an honor roll of SAC's most professional crews. To gain listing on the Screen, crew members must be nominated by their unit commanders and meet high selection criteria of experience in their aircraft or missile system *IAW AFR127-2/SS1*.

*U.S. Government Printing Office
1980-665-145

UNIVERSITY OF FLORIDA
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HALL OF FAME

FLARE

TACTICAL FLYING

OVER TWENTY-THREE YEARS

170 AREFG, McGuire (NJANG)	None

OVER TWENTY-ONE YEARS

171 AREFW, Greater Pittsburgh (PAANG)	Mar '58
157 AREFG, Pease (NHANG)	June '58
97 BMW, Blytheville	Aug '58

OVER TWENTY YEARS

940 AREFG, Mather (USAFR)	May '59
307 AREFG, Travis	Sep '59

OVER EIGHTEEN YEARS

151 AREFG, Salt Lake City (UTANG)	Feb '61
161 AREFG, Sky Harbor (AZANG)	Apr '61
126 AREFW, Chicago O'Hare (ILANG)	Apr '61
134 AREFG, McGhee Tyson (TNANG)	Aug '61

OVER SEVENTEEN YEARS

11 SG, Fairford	Feb '62
340 AREFG, Altus	Jun '62
96 BMW, Dyess	Aug '62

OVER SIXTEEN YEARS

19 BMW, Robins	Aug '63

OVER FIFTEEN YEARS

160 AREFG, Rickenbacker (OHANG)	Dec '64

OVER FOURTEEN YEARS

320 BMW, Mather	Jul '65

OVER TWELVE YEARS

92 BMW, Fairchild	Feb '67
55 SRW Offutt	Jul '67
2 BMW, Barksdale	Aug '67

OVER TEN YEARS

5 BMW, Minot	Feb '69
42 BMW, Loring	Sep '69
141 AREFW, Fairchild (WAANG)	Oct '69

OVER NINE YEARS

28 BMW, Ellsworth	May '70

OVER SEVEN YEARS

7 BMW, Carswell	Mar '72
101 AREFW, Bangor (MEANG)	Mar '72
306 SW, Mildenhall	Apr '72
416 BMW, Griffiss	May '72
305 AREFW, Grissom	Aug '72

OVER SIX YEARS

379 BMW, Wurtsmith	Apr '73

OVER FIVE YEARS

931 AREFG, Grissom (USAFR)	Feb '74
189 AREFG, Little Rock (ARANG)	May '74
43 SW, Andersen	Dec '74

OVER FOUR YEARS

68 BMW, Seymour Johnson	Sep '75
6 SW, Eielson	Dec '75

ICBM

OVER FIFTEEN YEARS

90 SMW, F E Warren	Jul '64
1 STRAD, Vandenberg	Sep '64

OVER FOURTEEN YEARS

308 SMW, Little Rock	Aug '65

OVER NINE YEARS

341 SMW, Malmstrom	Apr '70

OVER SIX YEARS

390 SMW, Davis-Monthan	Jul '73

OVER FIVE YEARS

351 SMW, Whiteman	Oct '74
91 SMW, Minot	Nov '74

To gain listing in the Hall of Fame, a SAC or ARF unit must be Class A mishap-free for 48 months.